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| APPLICATION NO.                                | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|------------------------------------------------|-------------|----------------------|---------------------|------------------|
| 09/857,698                                     | 11/09/2001  | Paul Berger          | C1043/7032          | 9935             |
| 7590 11/02/2005                                |             |                      | EXAMINER            |                  |
| Finnegan, Henderson, Farabow, Garrett & Dunner |             |                      | COLON, GERMAN       |                  |
| 1300 I Street, NW                              |             |                      | ART UNIT            |                  |
| Washington, DC 20005-3315                      |             |                      | PAPER NUMBER        |                  |
|                                                |             |                      | 2879                |                  |

DATE MAILED: 11/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                               |                               |  |
|------------------------------|-------------------------------|-------------------------------|--|
| <b>Office Action Summary</b> | Application No.<br>09/857,698 | Applicant(s)<br>BERGER ET AL. |  |
|                              | Examiner<br>German Colón      | Art Unit<br>2879              |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 15 August 2005.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 43-58 is/are pending in the application.
- 4a) Of the above claim(s)        is/are withdrawn from consideration.
- 5) ☐ Claim(s)        is/are allowed.
- 6) ☒ Claim(s) 43-58 is/are rejected.
- 7) ☐ Claim(s)        is/are objected to.
- 8) ☐ Claim(s)        are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No.       .
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                                                                |                                                                                                 |
|--------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. <u>      </u> |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                           | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)                     |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>      </u> | 6) <input type="checkbox"/> Other: <u>      </u>                                                |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 15, 2005 has been entered.

### ***Response to Amendment***

2. The Amendment, filed on August 15, 2005, has been entered and acknowledged by the Examiner.

### ***Specification***

3. The disclosure is objected to because of the following informalities:  
The Brief Description of the Drawings lacks a description of Fig. 1.  
Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 53 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 49, from which claim 53 is dependent, calls for the second electrode being the reflective influencing structure. However, claim 53 refers to said reflectivity-influencing structure being adjacent to the second electrode, i.e. as an additional structure. It is unclear whether the intended feature is a second electrode acting as a reflective influencing structure or two separate layers adjacent to one another.

#### *Claim Rejections - 35 USC § 102*

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 43-48, 52 and 54-56 are rejected under 35 U.S.C. 102(b) as being anticipated by Ito et al. (US 5,652,067).

Regarding claim 43, Ito discloses a light emissive device comprising:

a light-emissive region 4;

a first electrode 2 located on a viewing side of the light emissive region for injecting charge carriers of a first type; and

a second electrode 5 located on a non-viewing side of the light emissive region for injection charge carriers of a second type;

and wherein there is a reflectivity-influencing structure 6 located on the non-viewing side of the light emissive region and including a light absorbent layer comprising a fluoride or oxide of a metal having a work function of 3.5 eV or less (see Col. 19, lines 32-36).

Regarding claim 44, Ito discloses the first electrode being at least partially light-transmissive (see Col. 7, lines 21-30).

Regarding claims 45 and 48, Ito discloses the reflectivity influencing structure 6 being located on the opposite side of the second electrode 5 from the light emissive region (see Figs. 1-10).

Regarding claim 46, Ito discloses the second electrode being at least partially light transmissive (see Col. 7, lines 39-40).

Regarding claim 47, Ito discloses the second electrode 5 having a thickness of less than 30 nm (see Col. 19, lines 5-9).

Referring to claim 52, Ito discloses the reflectivity-influencing structure being located on the opposite side of the second electrode but is silent regarding the limitation of said reflectivity-influencing structure being effective to absorb light emitted from the light emissive region that reaches it through the second electrode and/or incident light.

However, the Examiner notes that the reference discloses each and every claimed structural limitation with the recited reflectivity-influencing structure material. The function of absorbing incident light is consequential of the properties of the structure material and "Products of identical chemical composition can not have mutually exclusive properties. A chemical

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composition and its properties are inseparable.” See MPEP 2112.01. Accordingly, these functional limitation is inherently possessed by the structure material of Ito.

Referring to claim 54, Ito discloses the second electrode comprising an electrically conductive material (see at least Col. 7, lines 39-41).

Referring to claim 55, Ito discloses the light-emissive region 4 comprising an organic light-emissive material (see disclosed materials for ref. 4).

Referring to claim 56, Ito discloses the light-emissive region comprising a polymer (see at least Col. 17, lines 8-9).

8. Claims 43, 44, 49-51, 53, 54 and 58 are rejected under 35 U.S.C. 102(e) as being anticipated by Nagayama et al. (US 5,949,186).

In regards to claim 43, Nagayama discloses a light emissive device comprising:

a light-emissive region **3**;

a first electrode **2** located on a viewing side of the light emissive region for injecting charge carriers of a first type; and

a second electrode **5 (13)** located on a non-viewing side of the light emissive region for injection charge carriers of a second type;

and wherein there is a reflectivity-influencing structure **13** located on the non-viewing side of the light emissive region and including a light absorbent layer comprising an oxide of a metal having a work function of 3.5 eV or less (see Col. 6, lines 44-46).

In regards to claim 44, Nagayama discloses the first electrode **2** being at least partially light-transmissive (see Col. 4, lines 25-27).

In regards to claims 49-50, Nagayama discloses the second electrode providing the reflectivity-influencing structure, wherein said electrode comprises an oxide of a low work function metal (see Col. 6, lines 44-46).

In regards to claim 51, Nagayama discloses the second electrode comprising Al (see Col. 6, lines 44-46).

In regards to claim 53, Nagayama discloses the reflectivity-influencing structure being located on the opposite side of the light-emissive region but is silent regarding the limitation of said reflectivity-influencing structure being effective to absorb light emitted from the light emissive region that reaches it through the second electrode and/or incident light.

However, the Examiner notes that the reference discloses each and every claimed structural limitation with the recited reflectivity-influencing structure material. The function of absorbing incident light is consequential of the properties of the structure material and "Products of identical chemical composition can not have mutually exclusive properties. A chemical composition and its properties are inseparable." See MPEP 2112.01. Accordingly, these functional limitation is inherently possessed by the structure material of Nagayama.

In regards to claims 54 and 58, Nagayama discloses the second electrode and the reflectivity-influencing structure being electrically conductive (see Col. 6, lines 44-46).

9. Claims 43, 56 and 57 are rejected under 35 U.S.C. 102(e) as being anticipated by Tamura (US 6,410,168).

Referring to claim 43, Tamura discloses a light emissive device (see Fig. 3) comprising:  
a light-emissive region **13**;

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a first electrode **12** located on a viewing side of the light emissive region for injecting charge carriers of a first type; and

a second electrode **14** located on a non-viewing side of the light emissive region for injection charge carriers of a second type;

and wherein there is a reflectivity-influencing structure **21** located on the non-viewing side of the light emissive region and including a light absorbent layer comprising a fluoride of a metal having a work function of 3.5 eV or less (see Col. 6, lines 60-61).

Referring to claims 56-57, Tamura discloses the light emissive region comprising a conjugated polymer material (see Col. 5, lines 1-2).

#### ***Response to Arguments***

10. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

#### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to German Colón whose telephone number is 571-272-2451. The examiner can normally be reached on Monday thru Thursday, from 8:30 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on 571-272-2457. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
gc

  
**KARABI GUHARAY**  
**PRIMARY EXAMINER**